

Technical Questions about the Iowa Test of Basic Skills (ITBS)

What types of results does the ITBS give on the school and district report?

The ITBS produces developmental standard scores (SS) (i.e., scaled scores), Grade Equivalent of Average SS (GE), National Stanine of Average SS, Normal Curve Equivalent of Average SS (NCE), Percentile Rank of Average SS (i.e., national student norms).

What does the developmental standard score (SS) mean?

The developmental standard score (SS) is a number that describes a student's location on a scale.

What is a Grade Equivalent of Average SS (GE) score?

The GE is a decimal number that describes performance in terms of grade level and months. For example, if a sixth-grade student obtains a GE of 7.8 on the Vocabulary test, her score is like the one a typical student at the end of the eighth month of seventh grade would likely get on the same Vocabulary test. The digits to the left of the decimal point represent the grade and those to the right represent the month within that grade. The GE only estimates a student's developmental level; it does not provide a prescription for grade placement.

What is the meaning of a National Stanine of Average SS score?

Stanine scores range from 1 to 9 and have an average value of 5. They also can be considered groupings of national percentile ranks, as the table below shows.

PR	1-4	5-11	12-23	24-40	41-59	60-76	77-88	89-95	96-99
S	1	2	3	4	5	6	7	8	9

Because stanines are coarse groupings of percentile ranks, they are less precise indicators of student achievement than percentile ranks. The fact that 23 and 24 are consecutive percentile ranks that are in different stanines (3 and 4, respectively) points out the potential misconceptions that could arise when using stanines. Although stanines are a type of standard score, they differ substantially from developmental standard scores.

What is a Normal Curve Equivalent of Average SS (NCE) score?

These scores are normalized standard scores. They have a mean of 50 and a standard deviation of 21.06 in the large norm group from which they were derived. They range from 1 to 99. Because NCEs cover the same score range as percentile ranks (1-99), the two types of scores are sometimes mistakenly interchanged.

NCE scores can be interpreted in much the same way as percentile ranks, but unlike percentile ranks, it is appropriate to average NCEs when describing group performance or when checking growth over time.

What is a national percentile rank (NPR) score?

A national percentile rank score compares the achievement of a student or a group of students to the achievement of a national sample of students who are in the same grade and who were tested at the same time of the year (fall, midyear, or spring). For example, if a student earned a percentile rank of 72 on the science test, it means she scored higher than 72 percent of the students in the group with which she is being compared.

**Percentile Rank (NPR), Normal Curve Equivalent (NCE), & Stanine (S9)
Conversion Table**

NPR	NCE	S9	NPR	NCE	S9	NPR	NCE	S9	NPR	NCE	S9
1	1	1	26	36	4	51	51	5	76	65	6
2	7	1	27	37	4	52	51	5	77	66	7
3	10	1	28	38	4	53	52	5	78	66	7
4	13	1	29	38	4	54	52	5	79	67	7
5	15	2	30	39	4	55	53	5	80	68	7
6	17	2	31	40	4	56	53	5	81	68	7
7	19	2	32	40	4	57	54	5	82	69	7
8	20	2	33	41	4	58	54	5	83	69	7
9	22	2	34	41	4	59	55	6	84	71	7
10	23	2	35	42	4	60	55	6	85	72	7
11	24	2	36	42	4	61	56	6	86	73	7
12	25	3	37	43	4	62	56	6	87	74	7
13	26	3	38	44	4	63	57	6	88	75	7
14	27	3	39	44	4	64	58	6	89	76	8
15	28	3	40	45	4	65	58	6	90	77	8
16	29	3	41	45	5	66	59	6	91	78	8
17	30	3	42	46	5	67	59	6	92	80	8
18	31	3	43	46	5	68	60	6	93	81	8
19	32	3	44	47	5	69	60	6	94	83	8
20	32	3	45	47	5	70	61	6	95	85	8
21	33	3	46	48	5	71	62	6	96	87	9
22	34	3	47	48	5	72	62	6	97	90	9
23	34	3	48	49	5	73	63	6	98	93	9
24	35	4	49	49	5	74	64	6	99	99	9
25	36	4	50	50	5	75	64	6			

What is the minimum number of questions that must be attempted for a student to receive a score on a subtest?

Students must mark a minimum number of answers per subtest in order to obtain a score. The table below shows the minimum number of answers required per subtest.

Completion Criteria for Utah's Administration of the Iowa Tests				
	Number of Items			
ITBS	Level 9	Level 11	Level 14	Minimum Number of Items
Reading: Part 1	10	12	14	3
Reading: Part 2	17	20	23	5
Language	43	51	59	12
Math: Part 1	19	23	29	6
Math: Part 2	4	5	6	1
Math: Part 3	8	9	11	2
Social Studies	30	37	43	9
Science	30	37	43	9

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